

Claims

1.-9. (cancelled)

10. (new) A method for determining a cause of a reduced performance of service in a communications network, the method comprising:

storing information describing functional properties and topological arrangement of network elements which are relevant to a provision of a service in a network element database and assigning the information to the service;

checking service availability and/or service quality for a selected service at preset points of time;

determining a service affected by a reduced performance of service based on a result of the checking;

determining network elements relevant to the provision of the service, which is affected by the reduced performance of service based on the information stored in the network element database; and

checking the determined network elements for determining a cause of the reduced performance of service.

11. (new) The method according to Claim 10, wherein the checking for service availability and/or service quality is carried out using a comparison with the information stored in the network element database.

12. (new) The method according to Claim 10, wherein the information stored in the network element database describes permissible operating ranges for the network elements and the determined network elements are checked to determine a cause of the reduced performance of service, using the information stored in the network element database.

13. (new) The method according to Claim 11, wherein the information stored in the network element database describes permissible operating ranges for the network elements and the determined network elements are checked to determine a cause of the reduced performance

of service, using the information stored in the network element database.

14. (new) The method according to Claim 10, wherein the determined network elements are checked to determine a cause of a reduced service performance by detecting status and/or fault messages for the said network elements.

15. (new) The method according to Claim 11, wherein the determined network elements are checked to determine a cause of a reduced service performance by detecting status and/or fault messages for the said network elements.

16. (new) The method according to Claim 12, wherein the determined network elements are checked to determine a cause of a reduced service performance by detecting status and/or fault messages for the said network elements.

17. (new) The method according to Claim 10, wherein for the purpose of checking service availability and/or service quality, control sequences containing service access requests to be executed on or by selected service access points are provided.

18. (new) The method according to Claim 11, wherein for the purpose of checking service availability and/or service quality, control sequences containing preset service access requests to be executed on or by selected service access points are provided.

19. (new) The method according to Claim 12, wherein for checking service availability and/or service quality, control sequences containing service access requests to be executed on or by selected service access points are provided.

20. (new) The method according to Claim 14, wherein for the purpose of checking service availability and/or service quality, control

sequences containing service access requests to be executed on or by selected service access points are provided.

21. (new) The method according to Claim 10, wherein network elements determined as essential for the provision of a selected service are checked at defined times regarding their ability to operate.

22. (new) The method according to Claim 11, wherein network elements determined as essential for the provision of a selected service are checked at defined times regarding their ability to operate.

23. (new) The method according to Claim 12, wherein network elements determined as essential for the provision of a selected service are checked at defined times regarding their ability to operate.

24. (new) The method according to Claim 14, wherein network elements determined as essential for the provision of a selected service are checked at defined times regarding their ability to operate.

25. (new) The method according to Claim 17, wherein network elements determined as essential for the provision of a selected service are checked at defined times regarding their ability to operate.

26. (new) The method according to Claim 10, wherein terminals specified by a service level agreement are tested at selected times regarding their ability to operate.

27. (new) The method according to Claim 11, wherein terminals specified by a service level agreement are tested at selected times regarding their ability to operate.

28. (new) A communications network control and monitoring system, comprising:

a communication connection management device for storing information that describes the functional properties and topological

arrangement of network elements which are relevant to the provision of a service in a network element database and for assigning this information to the service; and

a service quality and/or fault-monitoring device for causing a check of service availability and/or service quality for a selected service at preset times, for determining a service affected by a reduced service performance with the aid of a result of the check, for determining network elements relevant to the provision of the service affected by the reduced service performance with the aid of the information stored in the network element database, and for causing a test of the determined network elements to determine a cause of the reduced service performance.

29. (new) A control program for a service quality and/or fault-monitoring device of a communications network control and monitoring system, the system comprising:

a communication connection management device for storing information that describes the functional properties and topological arrangement of network elements which are relevant to the provision of a service in a network element database and for assigning this information to the service; and

a service quality and/or fault-monitoring device for causing a check of service availability and/or service quality for a selected service at preset times, for determining a service affected by a reduced service performance with the aid of a result of the check, for determining network elements relevant to the provision of the service affected by the reduced service performance with the aid of the information stored in the network element database, and for causing a test of the determined network elements to determine a cause of the reduced service performance, wherein

the control program can be loaded into a random access memory of a data processing device assigned to the service quality and/or fault-monitoring device and having at least one code section, during the execution of at least one code section the following steps are performed:

testing service availability and/or service quality for a selected service are at preset times;

determining a service affected by a reduced performance of service based on a result of the testing;

determining network elements relevant to the provision of the service, which is affected by the reduced performance of service, based on the information stored in the network element database; and

testing the determined network elements in order to determine a cause of the reduced performance of service.